

Symptomatic Triticeal Cartilage: An Unusual Etiology of Unilateral Odynophagia and Pharyngeal Discomfort

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Publication Date: 2025/11/12

Abstract:

➤ Background

Older adults with throat discomfort often undergo imaging to exclude malignancy, vascular disease, or infection. Rarely, asymmetric enlargement and ossification of the triticeal cartilage can mimic these serious pathologies.

➤ Case Presentation

A 78-year-old man had persistent right-sided throat discomfort, odynophagia, and foreign-body sensation for ten weeks. Images acquired in 128 slice GE-OPTIMA CT 660, with slice thickness of 1.5 mm, 120 kVp, 200 mAs, with standard iterative reconstruction, showed bilateral partially ossified triticeal cartilages, with asymmetric enlargement on the right. The right cartilage (4.8 mm) compressed the posterior pharyngeal wall and nearly effaced the right pyriform sinus, while the smaller left cartilage (3.2 mm) caused no impingement. These findings correlated with the unilateral symptoms and excluded neoplastic or stylohyoid anomalies. Symptoms resolved completely after conservative management with NSAIDs over 12 weeks, underscoring the benign nature of symptomatic ossified triticeal cartilage.

➤ Conclusion

Awareness of symptomatic triticeal cartilage prevents misdiagnosis and unnecessary interventions.

Keywords: Triticeal Cartilage, Odynophagia, Computed Tomography of Neck, Neck Pain, Foreign Body Sensation, Anatomical Variation, Pyriform Sinus Compression.

How to Cite: Srujan Gulipalli; Kiran K. V.; Kamal Bhalla; Rishikesh Itagi (2025) Symptomatic Triticeal Cartilage: An Unusual Etiology of Unilateral Odynophagia and Pharyngeal Discomfort. *International Journal of Innovative Science and Research Technology*, 10(11), 192-195. <https://doi.org/10.38124/ijisrt/25nov309>

I. INTRODUCTION

Throat discomfort in older adults prompts evaluation for malignancy, vascular disease, and infection⁽¹⁾. Occasionally, an ossified triticeal cartilage can mimic these conditions and cause similar symptoms⁽²⁾. We report a rare case of symptomatic ossified triticeal cartilage confirmed on CT.

II. CASE PRESENTATION

A 78-year-old man presented with right-sided throat discomfort, odynophagia, and foreign-body sensation for ten weeks. There was no dysphagia, fever, infection, trauma, or prior neck intervention. Examination showed no masses and

neurologic findings were normal. Differential diagnoses included pharyngeal mass, Eagle syndrome, and vascular calcification. Standard lateral neck radiographs were inconclusive. CT neck demonstrated bilateral ovoid calcifications in the lateral thyrohyoid membranes, consistent with triticeal cartilages. Axial CT showed the right-sided structure measured 4.8 mm and compressed the posterior pharyngeal wall, nearly obliterating the right pyriform sinus (Figs.1). Coronal and sagittal reformations confirmed this mass effect (Figs. 2, 3). The left (3.2 mm) was intact without impingement. No mass, inflammation, or vascular abnormality was present. The asymmetry accounted for the unilateral symptoms. The patient's symptoms were resolved with a short course of nonsteroidal anti-inflammatory drugs

(NSAIDs) such as Diclofenac, underscoring the benign nature of symptomatic ossified triticeal cartilage.

III. DISCUSSION

Triticeal cartilage is a small accessory cartilage in the lateral thyrohyoid ligament, connecting the superior cornu of the thyroid cartilage to the greater cornu of the hyoid bone^(1,2). Embryologically, it arises from the fourth and sixth pharyngeal arches during early fetal development. Ossification occurs in up to one-third of adults and is usually incidental. Enlarged ossified cartilage may compress adjacent

structures and cause symptoms such as odynophagia or localized throat discomfort^(2,6).

In this case, a large right triticeal cartilage indented the pyriform sinus, explaining unilateral symptoms. Multiplanar CT was crucial to confirm diagnosis and exclude Eagle syndrome and vascular lesions⁽⁵⁾.

➤ Radiological Differential Diagnosis

The ossified triticeal cartilage must be differentiated from other calcified entities encountered in the neck on imaging.

Table 1 Summarizes Key Imaging Features and Clinical Implications of Common Mimics.

Entity	Location	Morphology	Clinical Relevance
Triticeal cartilage	Lateral thyrohyoid membrane	Ovoid, corticated, 2–5 mm	May cause odynophagia if enlarged
Carotid atheroma	Carotid sheath, lateral	Irregular, tubular	Vascular symptoms, stroke risk
Ossified stylohyoid ligament (Eagle syndrome)	Styloid process to hyoid	Elongated, linear	Pain on swallowing, neck turning
Neoplasm/foreign body	Variable, often mucosal	Irregular, non-corticated	Dysphagia, weight loss, mass effect

Failure to distinguish these can result in unnecessary biopsies or surgical exploration. CT morphology, location, and cortication characteristics are decisive for diagnosis⁽⁵⁾.

IV. MANAGEMENT AND OUTCOMES

Most cases are incidental and need no treatment⁽¹⁾. Mild symptomatic cases respond to NSAIDs and observation such as demonstrated in the present patient, whose symptoms resolved spontaneously within three months. Surgery is rarely required and reserved for persistent symptoms⁽⁴⁾.

V. CONCLUSION

Ossified triticeal cartilage is an uncommon but benign cause of unilateral throat symptoms. CT accurately identifies this variant and prevents unnecessary work-up.

Awareness among radiologists and clinicians can prevent unnecessary interventions and reassure patients with benign findings.

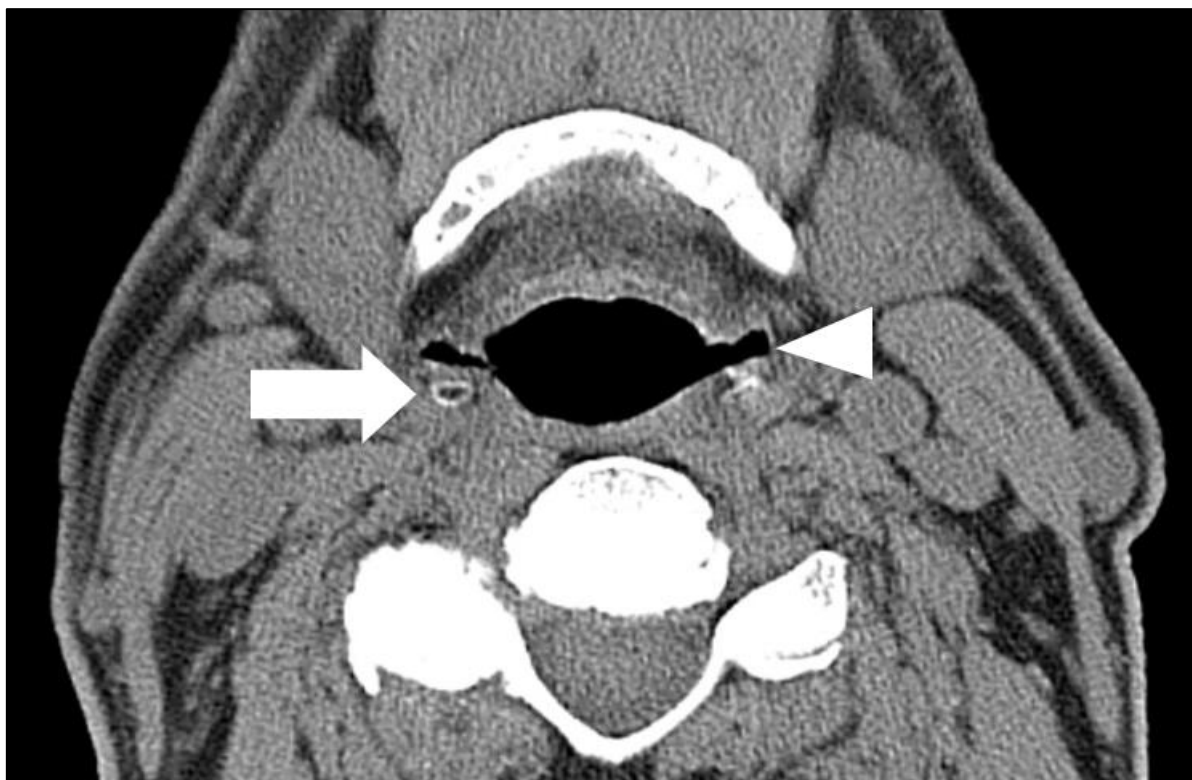
FIGURE LEGENDS

Fig 1: Axial CT at the Hyoid Level Shows the Right Ossified Triticeal Cartilage (Arrow) Compressing the Posterior Pharyngeal Wall, Nearly Obliterating the Right Pyriform Sinus. The Left Pyriform Sinus is Patent (Arrow Head). Teaching Point: Corticated Margins and Thyrohyoid Membrane Location Distinguish Triticeal Cartilage from Pharyngeal Pathology.

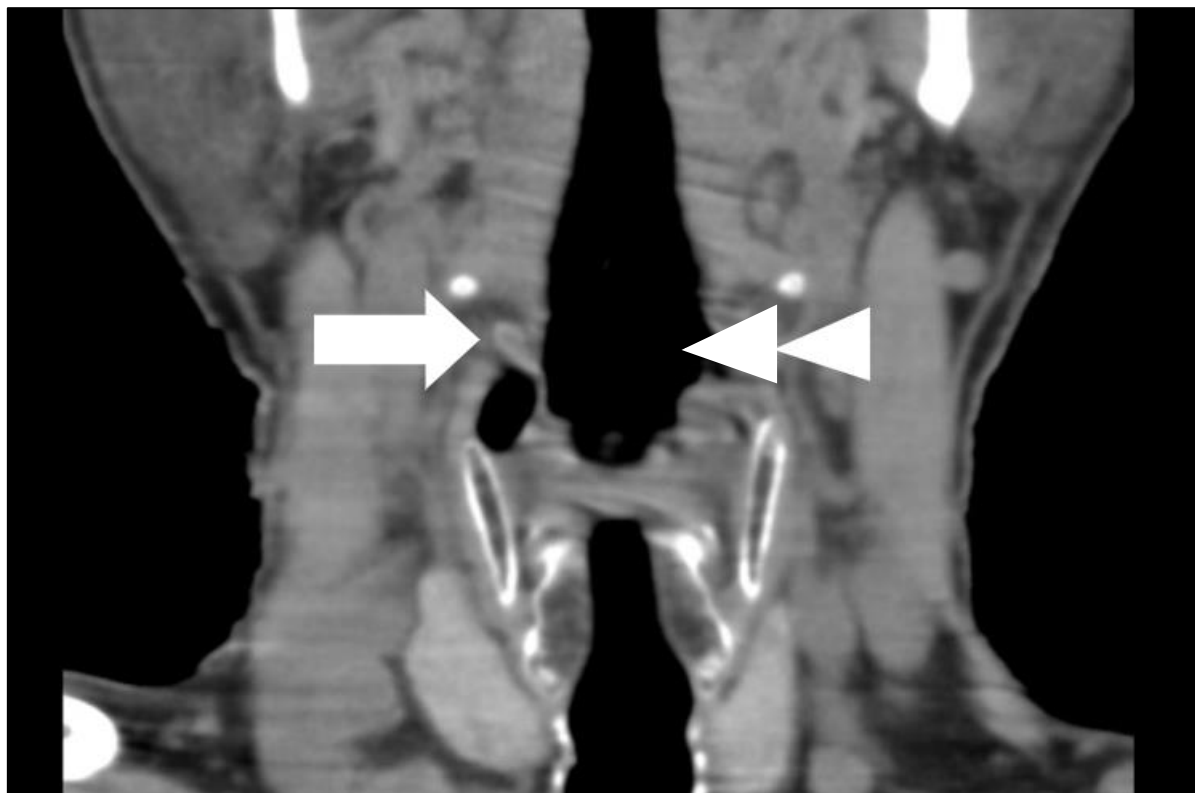


Fig 2: Coronal CT Reformation Shows Bilateral Triticeal Cartilages, with the Right (Arrow) Indenting the Pharyngeal Wall and the Left (Arrow Head) Non-Impinging. Teaching Point: Asymmetry in Cartilage Size May Cause Unilateral Symptoms.



Fig 3: Sagittal CT Reformation Demonstrates the Right Triticeal Cartilage (Arrow) Causing Pharyngeal Wall Compression.
Teaching Point: Sagittal Views Confirm Mass Effect and Exclude Eagle Syndrome.

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